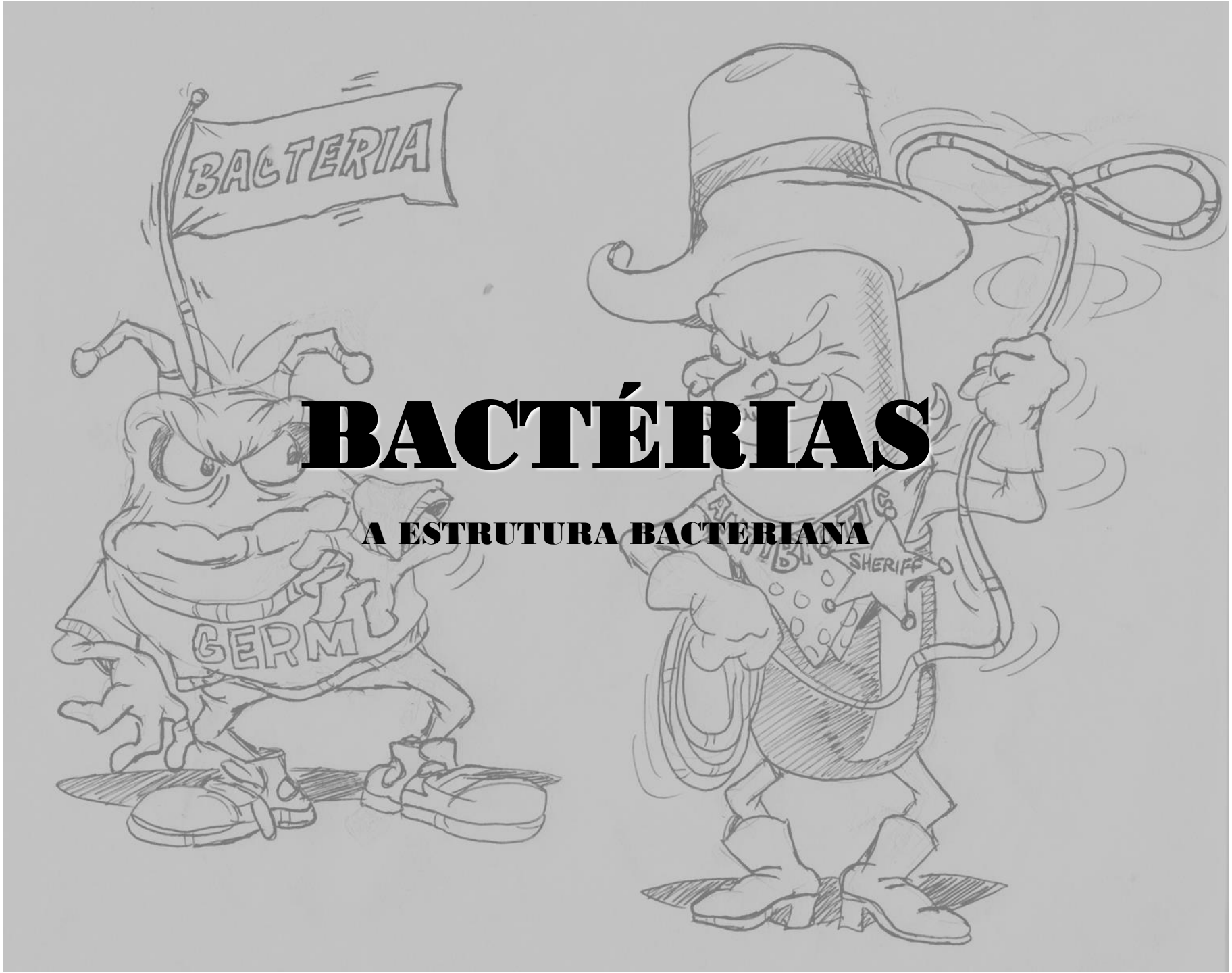
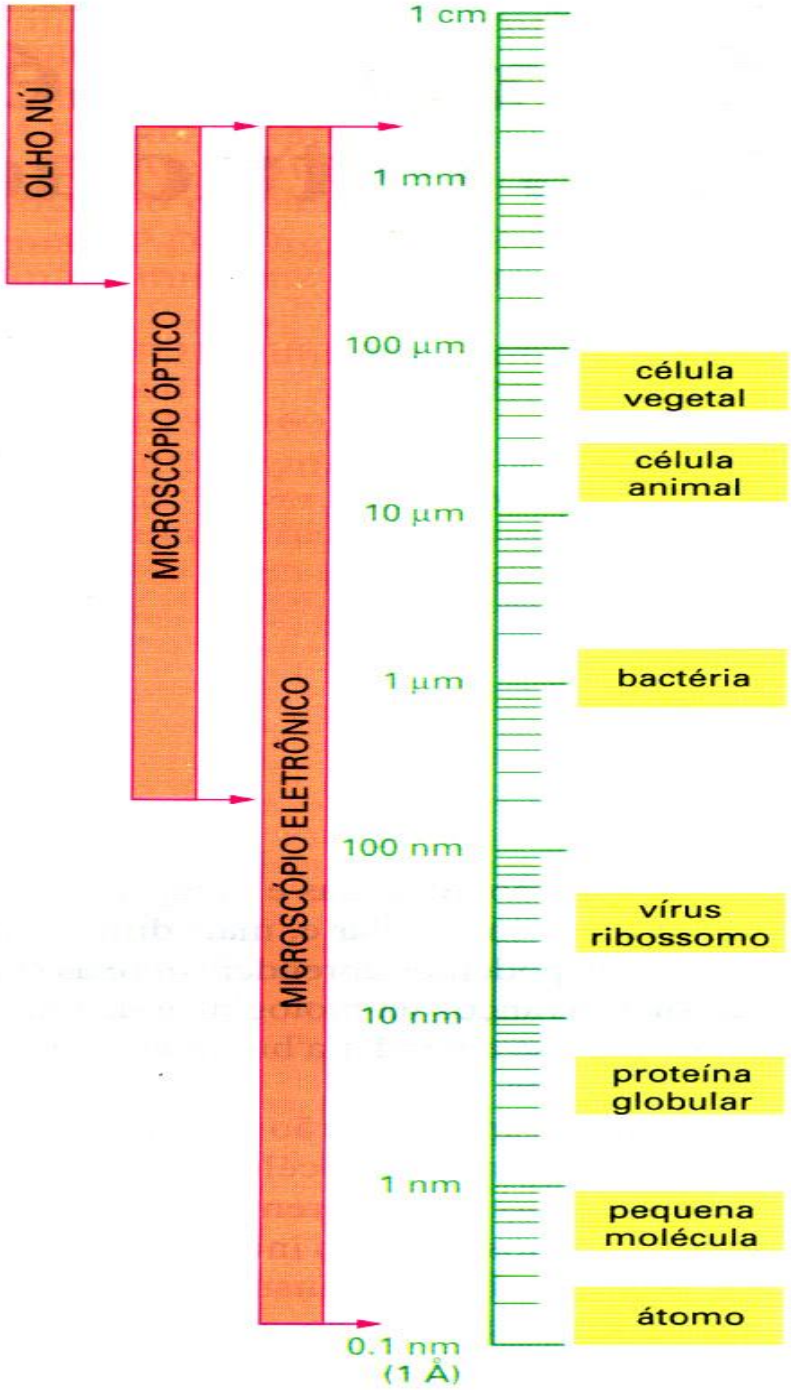


BACTÉRIAS

A ESTRUTURA BACTERIANA

Poder de resolução: Tamanho de células e de seus componentes, observados em escala logarítmica, indicando a faixa de objetos que podem ser propriamente visualizados a olho nu e através de microscópios óptico e eletrônico.



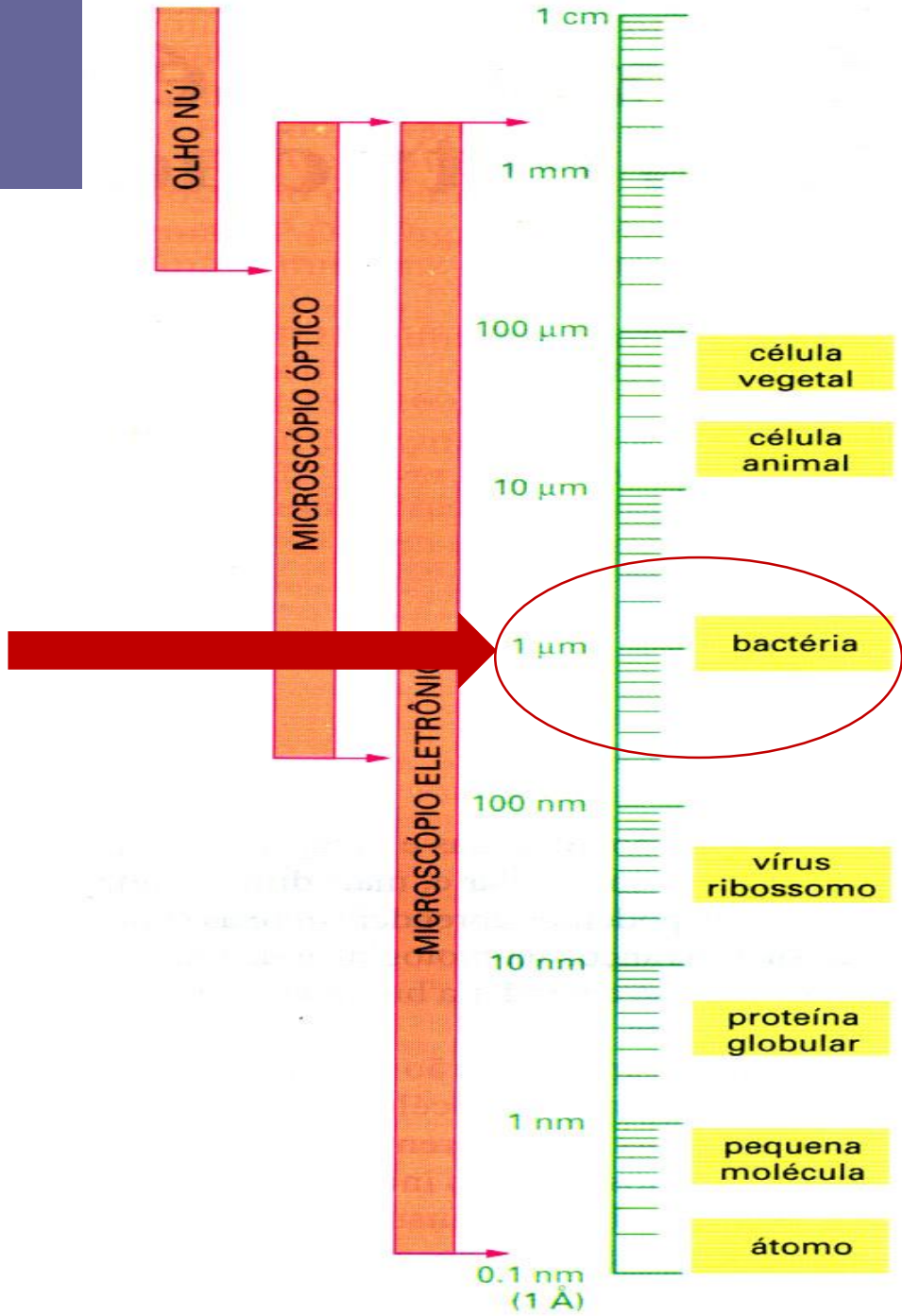
Unidades de medidas

cm = 10^{-2m}
mm = 10^{-3m}
µm = 10^{-6m}
nm = 10^{-9m}
Å = 10^{-10m}

Bactérias

Morfologia

- Tamanho:
- 0,1 a 2,0 μm de diâmetro
- 2 a 10 μm de comprimento

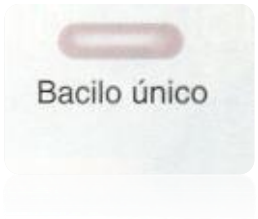


MORFOLOGIA BACTERIANA

Formas básicas

- coco

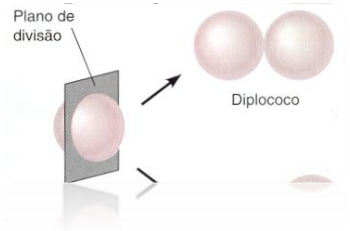
- bacilo



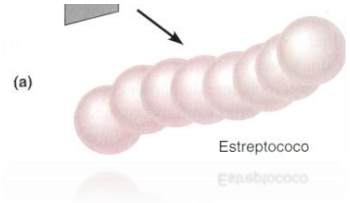
- espiral

MORFOLOGIA BACTERIANA - Arranjos dos Cocos

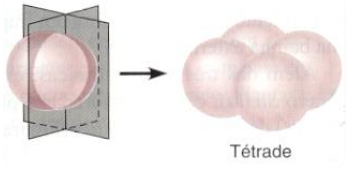
- Diplococo



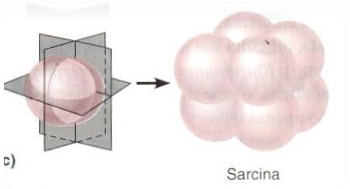
- Estreptococo



- Tétrade



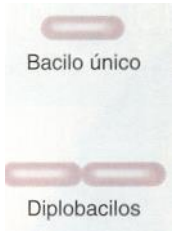
- Sarcina



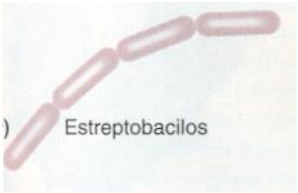
- Esta**filococo**

MORFOLOGIA BACTERIANA - Bacilos

- Bacilo



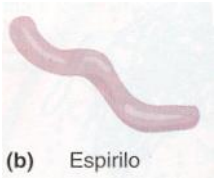
- Estreptobacilos



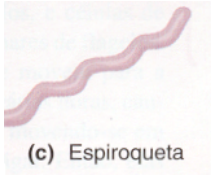
- Cocobacilos

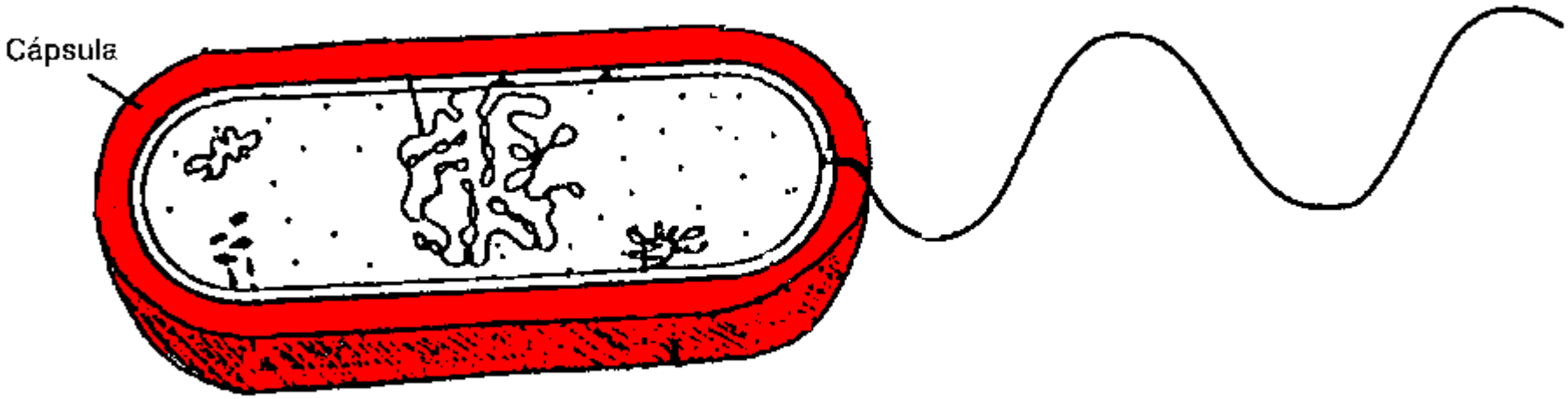
- Vibrião

- Espirilo



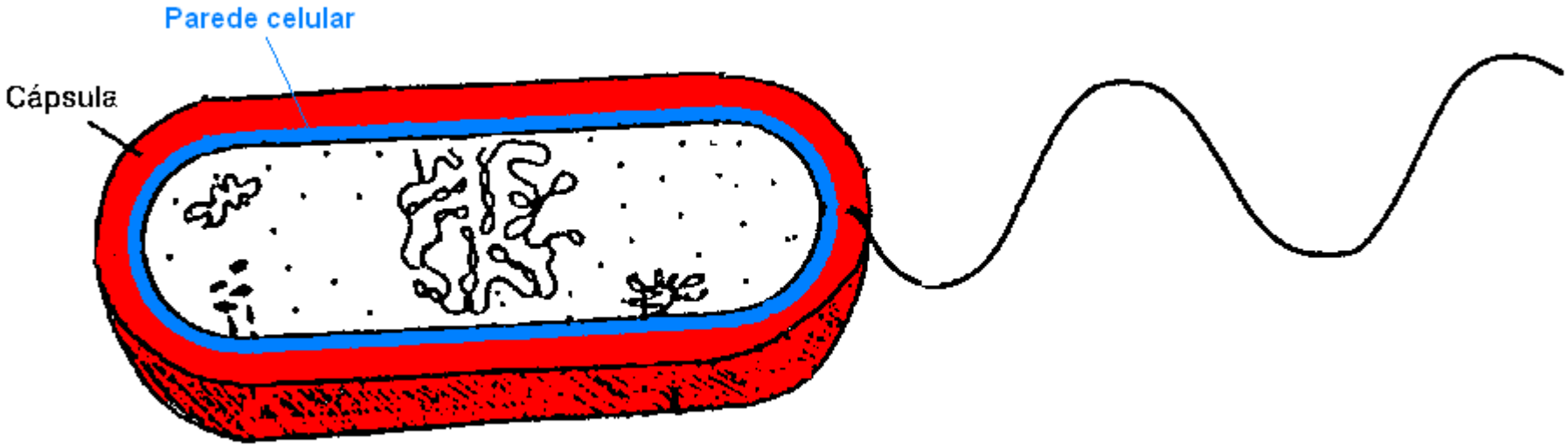
- Espiroqueta





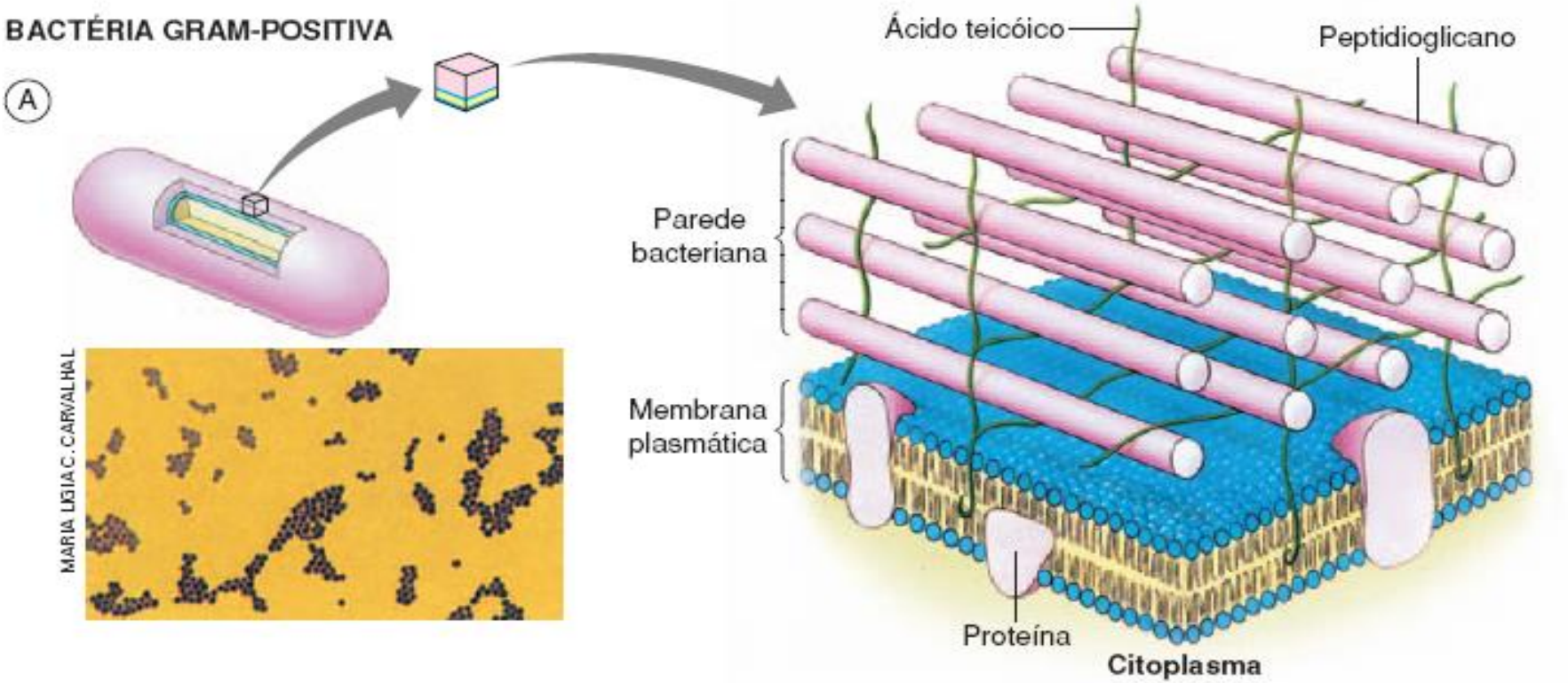
Cápsula:

- ✓freqüentemente associada à virulência;
- ✓interfere na fagocitose;
- ✓pode prolongar a vida no ambiente.



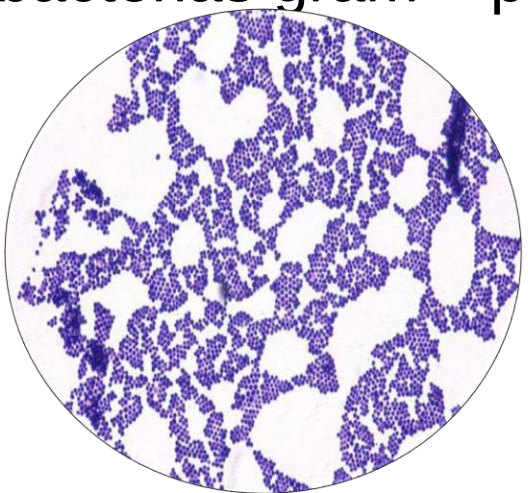
Parede celular – formada por:

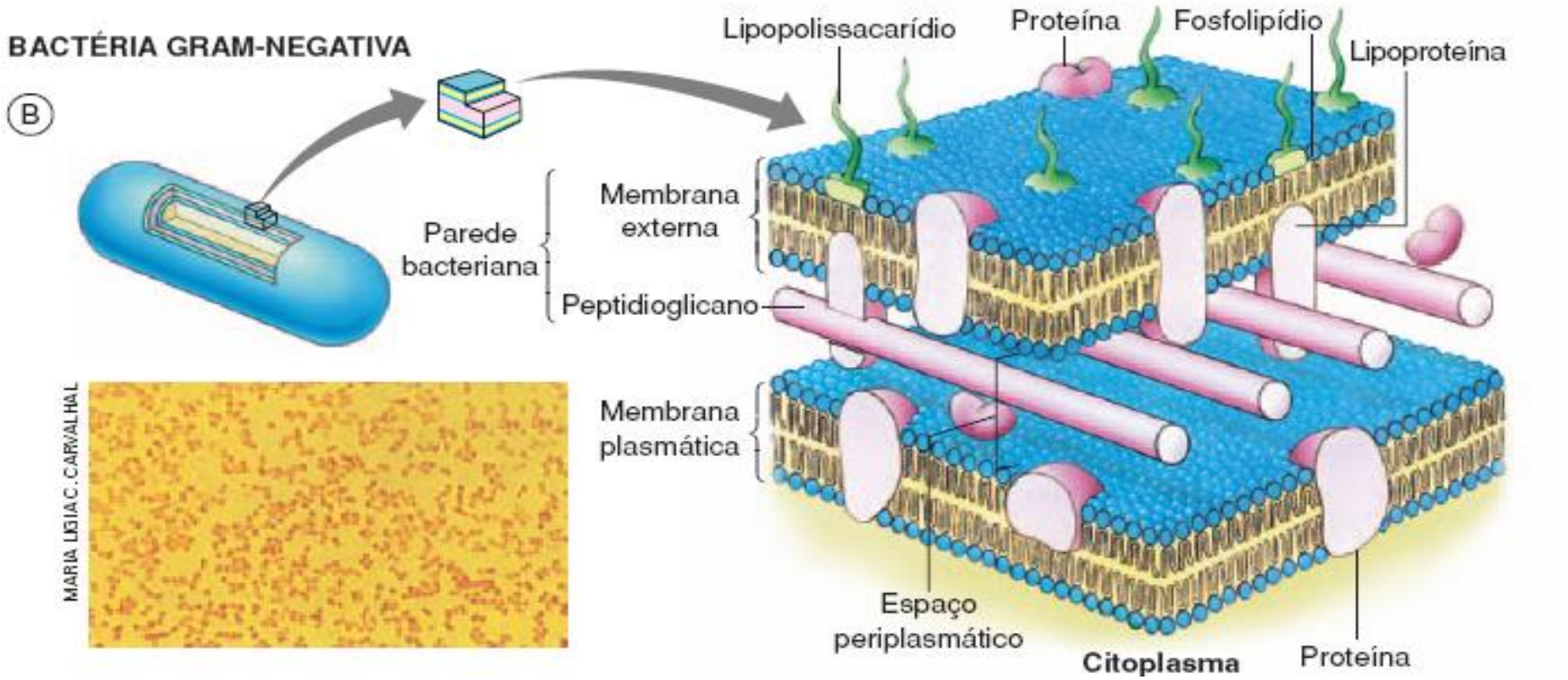
- ✓peptidioglicano = forma;
- ✓lipopolissacarídeo (LPS) = efeito endotóxico;



Parede celular:

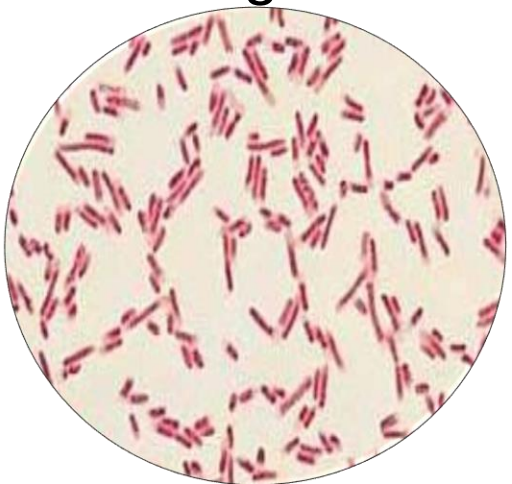
✓bactérias gram – positivas: peptidioglicano + ac. teicóico;



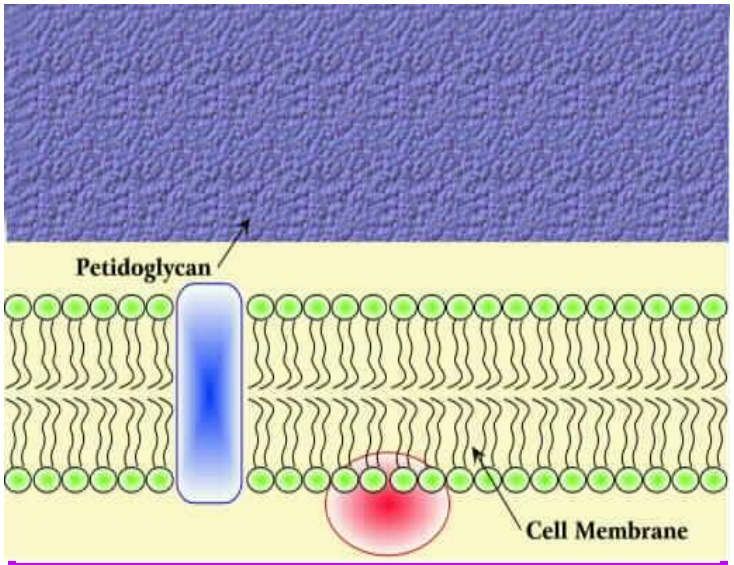


Parede celular:

✓bactérias gram – negativa: lipopolissacarídeo + proteína + fosfolipídeo + peptidioglicano;



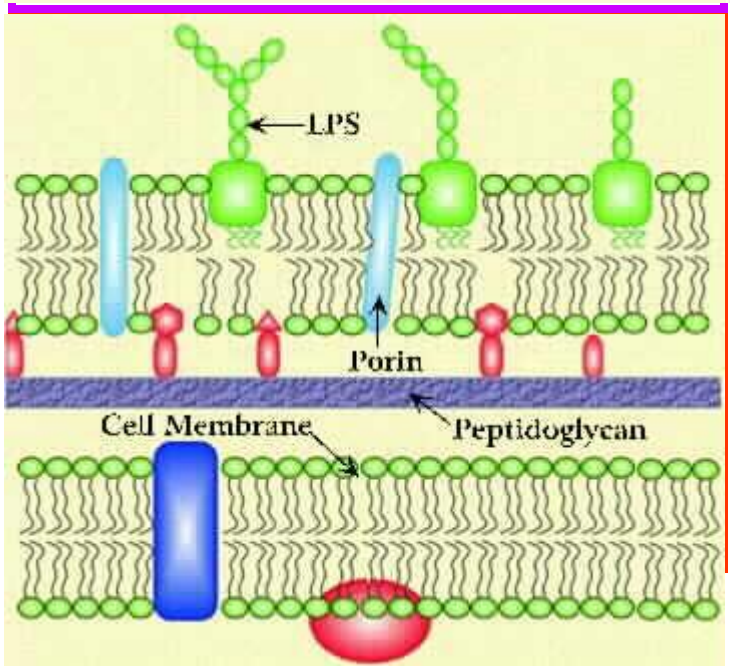
⬊ Gram +



Várias camadas de peptideoglicano

Membrana plasmática

⬊ Gram -

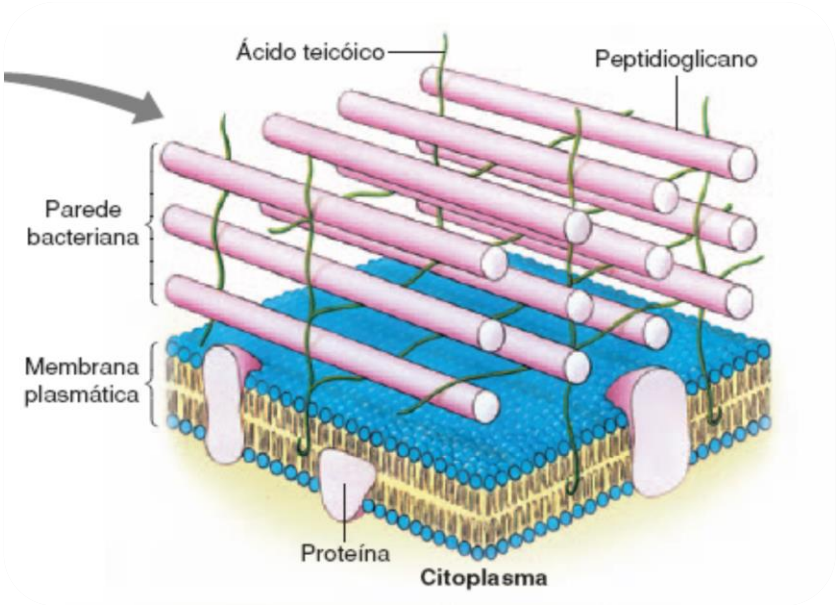


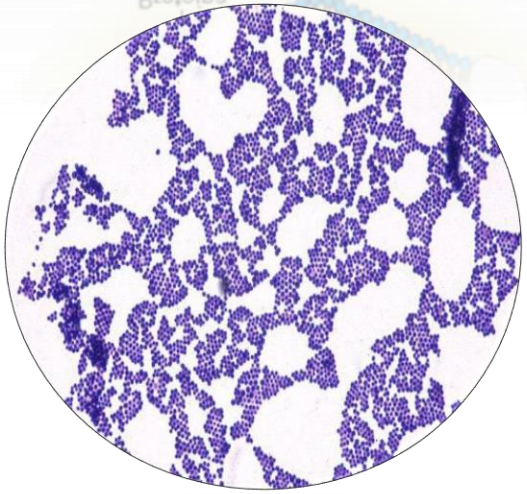
Camada externa de lipopolissacarídeo (LPS)

Pouco peptideoglicano

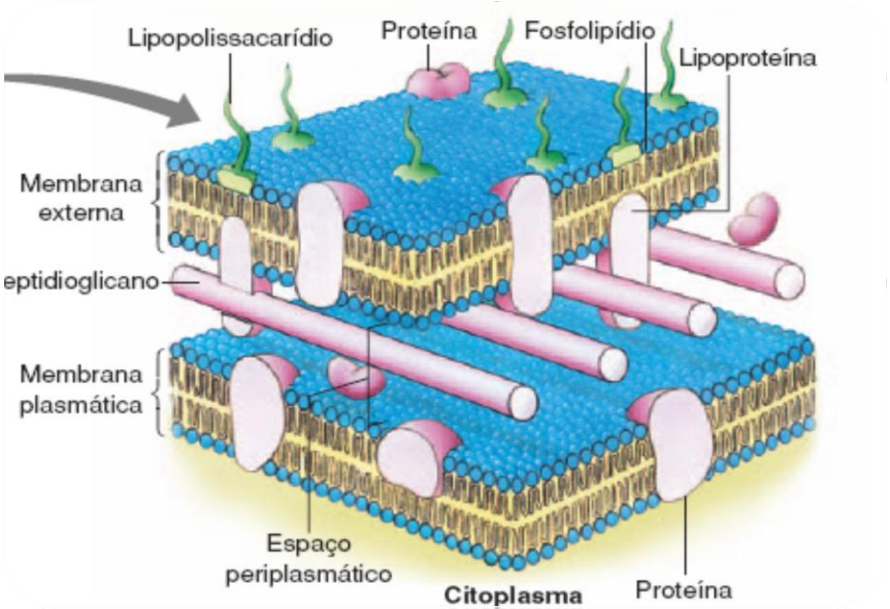
Membrana plasmática

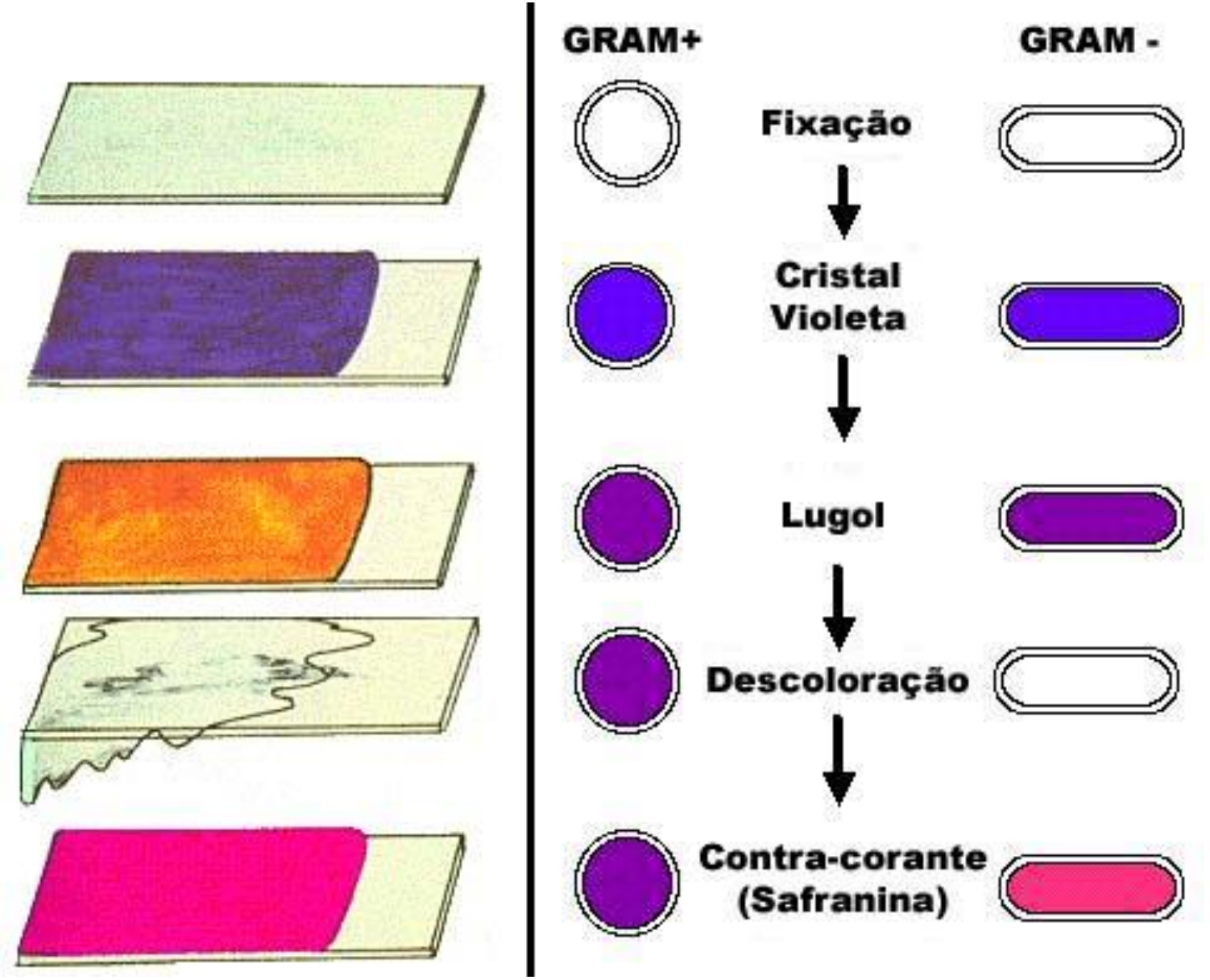
BACTÉRIA GRAM POSITIVA

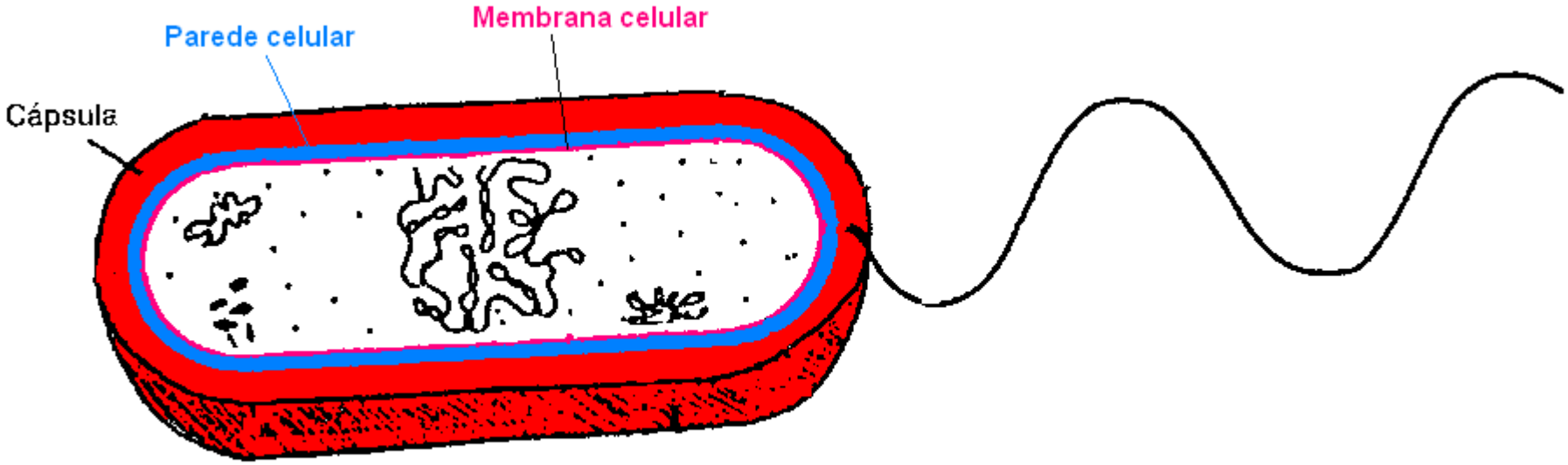




BACTÉRIA GRAM NEGATIVA

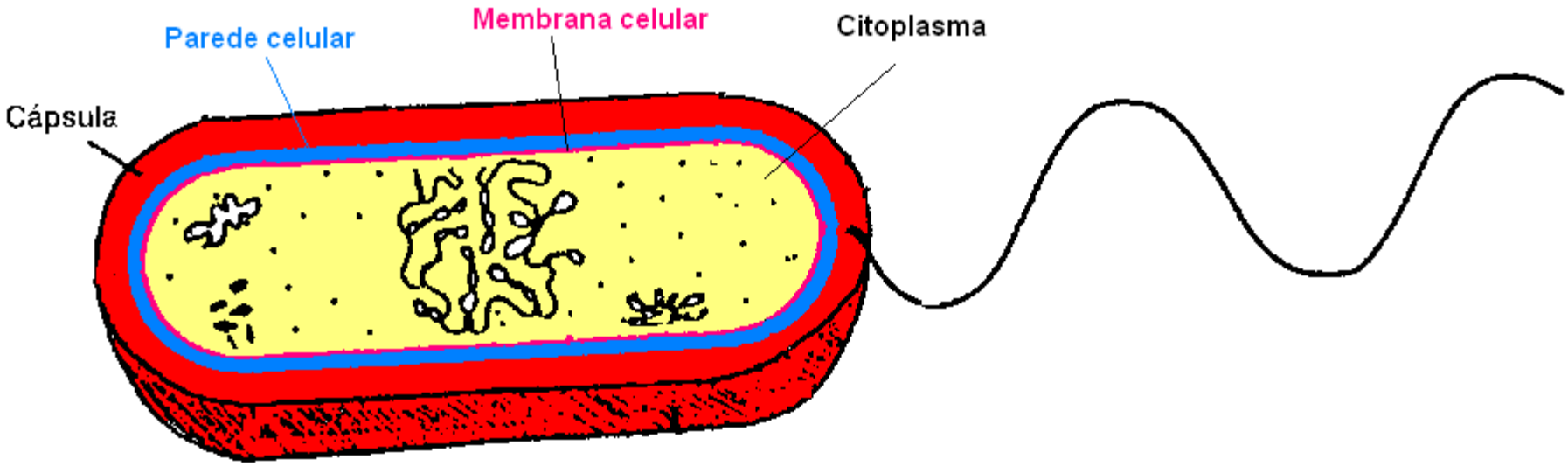



GRAM+
GRAM -
Fixação
Cristal
Violeta
Lugol
Descoloração
Contra-corante
(Safranina)

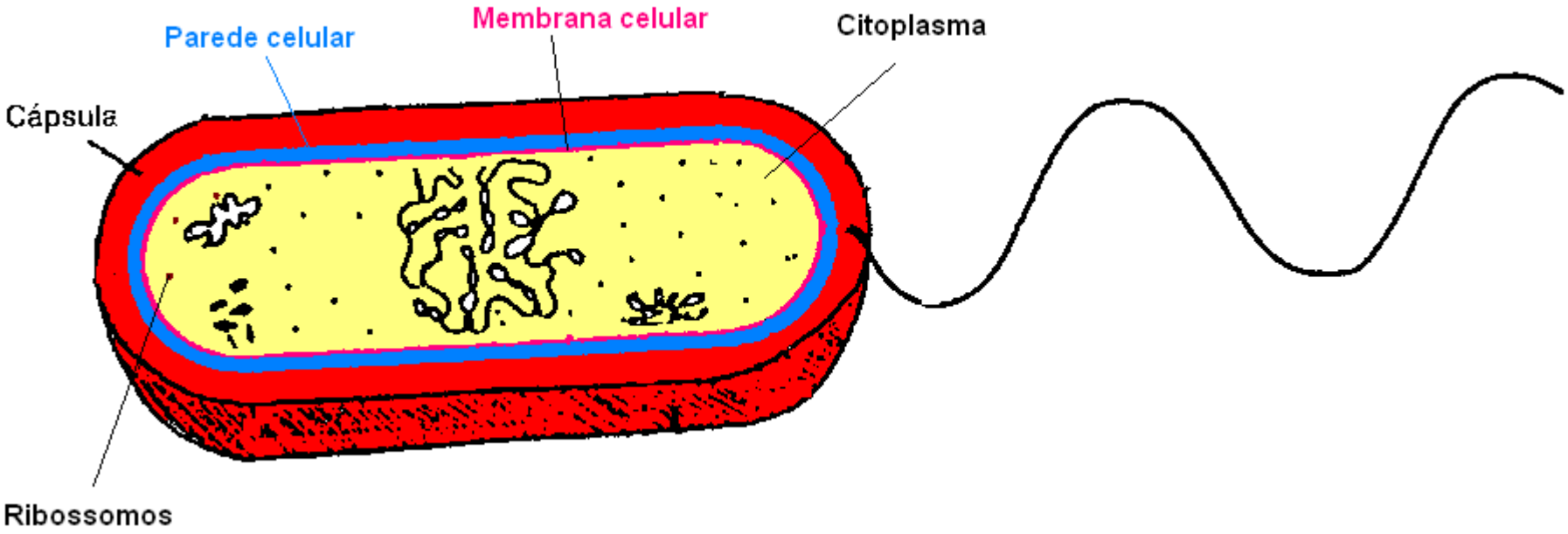


Membrana celular:

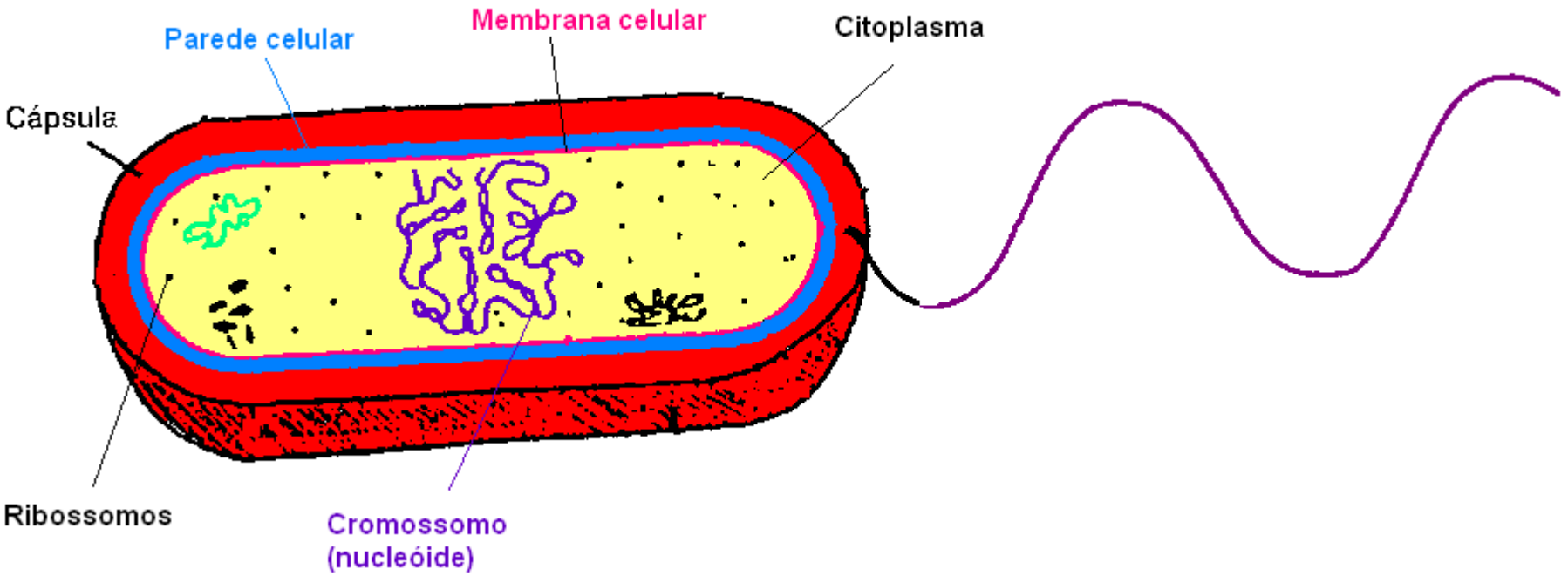
- ✓bicamada fosfolipídica;
- ✓permeabilidade seletiva (nutrição, respiração, excreção e quimiorregulação)



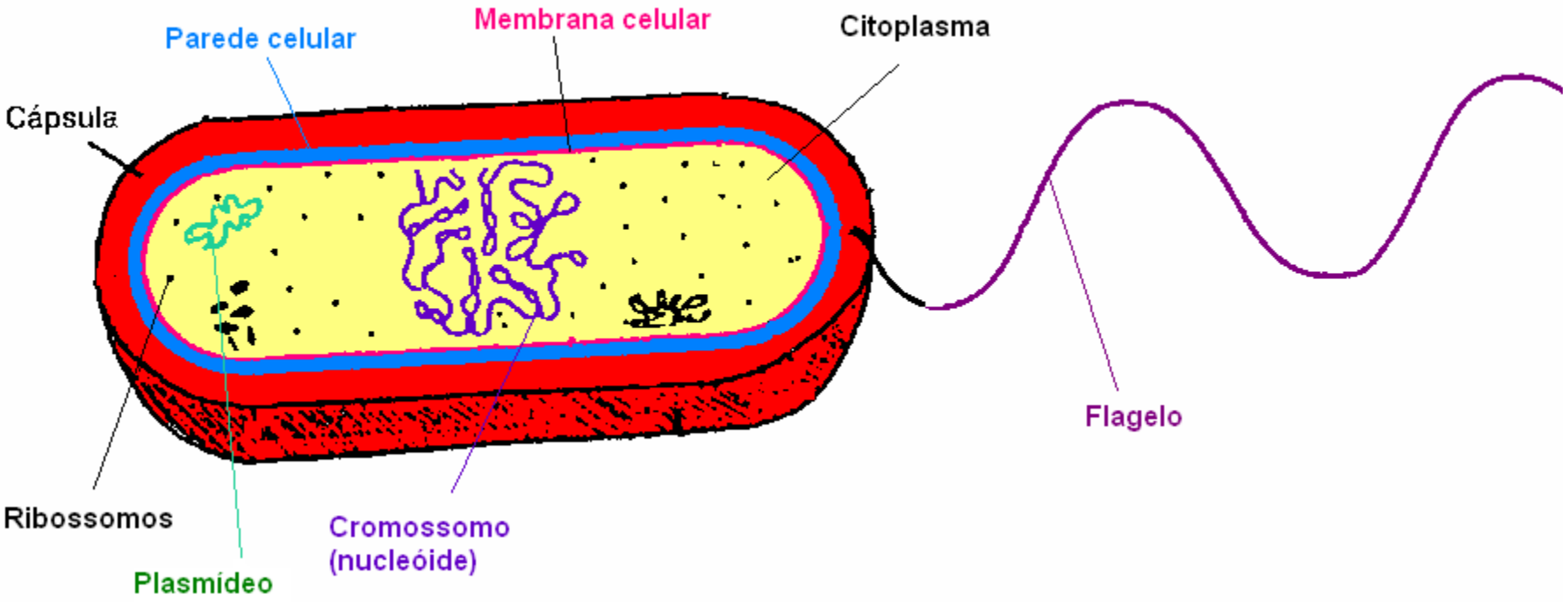
Citoplasma: ✓fluido aquoso contendo o material celular;



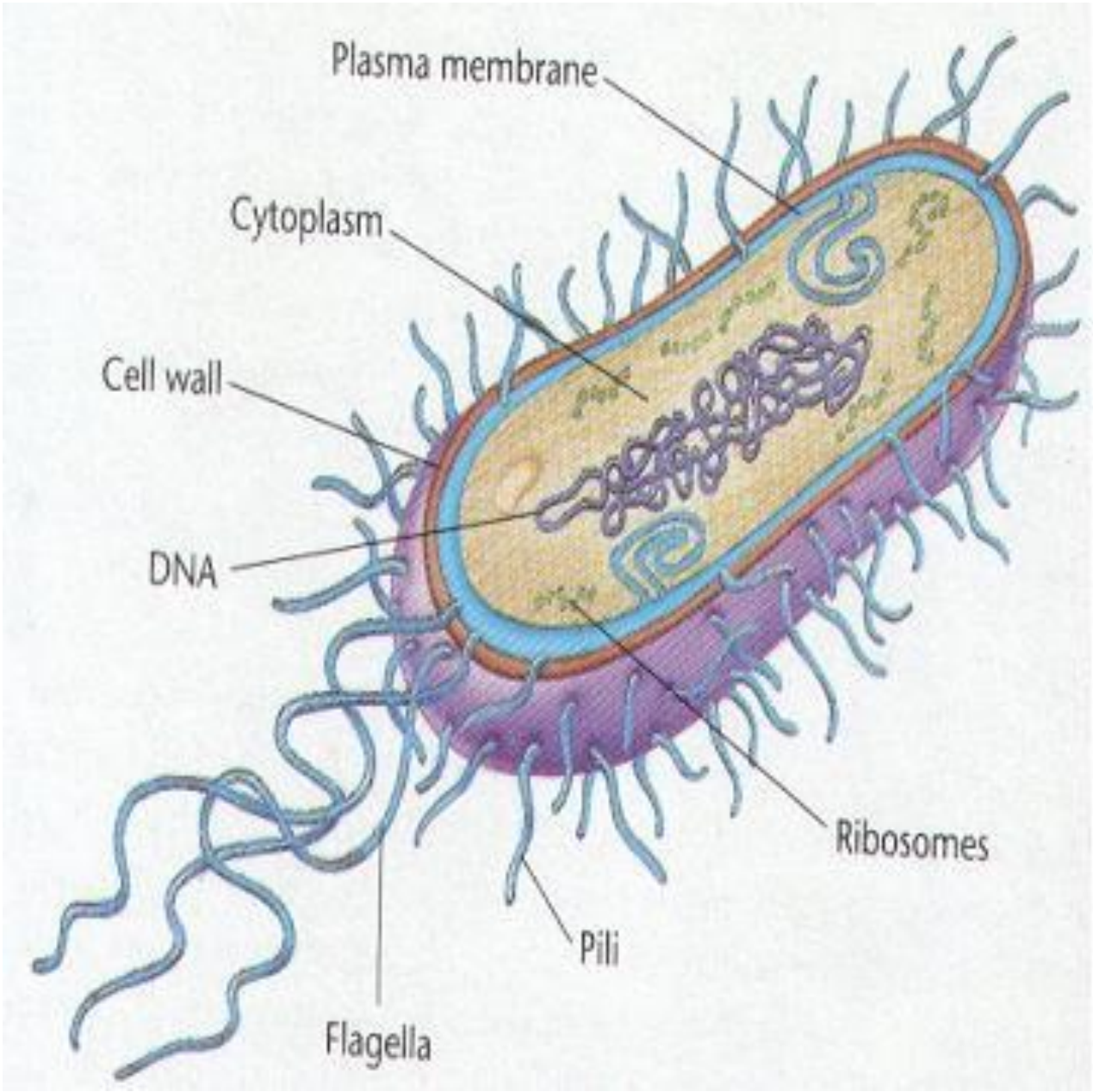
Ribossomos: ✓síntese de proteínas;



DNA: ✓estrutura simples e circular (haplóide);



Plasmídeo: ✓resistência a antibióticos;
✓produção de exotoxinas;


Plasma membrane
Cytoplasm
Cell wall
DNA
Ribosomes
Pili
Flagella

Colônia bacteriana